

What is claimed is:

1. A peptide compound, comprising about ten to about 50 amino acids in a sequence, wherein the sequence comprises the integrin binding motif and is further characterized by a biological activity which enhances bone growth, wherein the amino acid may be in the D- or L- conformation.
2. The peptide of claim 1, wherein the integrin binding motif is RGD sequence.
3. The peptide of claim 1, wherein the amino acid sequence is contiguous with the RGD sequence in naturally occurring protein matrix extracellular phosphoglycoprotein.
4. The peptide of claim 1, comprising from about 15 to about 35 amino acids.
5. The peptide of claim 1, wherein the amino acids are in the L-conformation.
6. The peptide compound of claim 1, wherein the peptide is selected from the

group consisting of:

AQKSPVKSSTHRIQHNIDYLNKHLKSVKKIPSDFEFGSYTDLQ**RGD**  
RGDAQKSPVKSSTHRIQHNIDYLNKHLKSVKKIPSDFEFGSYTDLQE  
DSQAQKSPVKSSTHRIQHNIDYLNKHLKSVKKIPSDFEFGSYTDR**RGD**  
RGDSPVKSSTHRIQHNIDYLNKHLKSVKKIPSDFEFGSYTDLQE  
DSQAQKSPVKSSTHRIQHNIDYLNKHLKSVKKIPSDFEFGSR**RGD**  
RGDTHRIQHNIDYLNKHLKSVKKIPSDFEFGSYTDLQE  
DSQAQKSPVKSSTHRIQHNIDYLNKHLKSVKKIPSDFER**RGD**  
RGDLKHLKSVKKIPSDFEFGSYTDLQE  
DSQAQKSPVKSSTHRIQHNIDYLNKHLKSVKKIPSR**RGD**  
RGDLSKSVKKIPSDFEFGSYTDLQE  
DSQAQKSPVKSSTHRIQHNIDYLNKHLK**RGD**  
RGDVKKIPSDFEFGSYTDLQE  
DSQAQKSPVKSSTHRIQHNIDYLNK**RGD**  
RGDIPSDFEFGSYTDLQE

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DSQAQKSPVKSSTHRIQHNIDRGD  
RGDDFEGSGYTDLQE  
DSQAQKSPVKSSTHRRGD  
RGDGSGYTDLQE  
DSQAQKSPVKRGD  
RGDGYTDLQE  
DSQAQKSRGD  
RGDNDISPFSGDGQPFKDIPGKGEATGPDLEGKDIQTGFA

NDI RGDSPFSGDGQPFKDIPGKGEATGPDLEGKDIQTGFA  
NDISPF RGDSGDGQPFKDIPGKGEATGPDLEGKDI  
NDISPFSGD RGDGQPFKDIPGKGEATGPD  
FSGDGQPFKDIPGKGEATGPDLEGKDIQTGFAGPSEAES RGDTHL  
IPGKGEATGPDLEGKDIQTGFAGPSE RGDAESTHL  
EATGPDLEGKDIQTGFAG RGDPSAEESTHL  
NDISPFSGDGQPFKD RGDIPGKGEATGPDLEGK  
GKGEATGPDLEGKDI RGDQTGFAGPSEAESTHL  
FSGDGQPFKDIPGKGEATG RGDPDLEGKDIQTGFAGPSEA  
DGQPFKDIPGKGEATG RGDPDLEGKDIQTGF  
PFKDIPGKGEATG RGDPDLEGKDIQ  
DIPGKGEATG RGDPDLEGKDIQTGFAGP  
DGQPFKDIPGKGEATG RGDPDLEGKDIQTGF  
GKGEATG RGDPDLEGKDIQTGFAGPSEA  
EATG RGDPDLEGKDIQTGF  
EATG RGDPDLEGK  
EATG RGD PDL

7. The peptide of claim 1, comprising the sequence  
TDLQERGDNDISPFSGDGQPFKD

8. A peptide characterized by:
- (a) ten to fifty amino acids;
  - (b) an RGD sequence;
  - (c) amino acids substantially the same as those contiguous with an RGD sequence of naturally occurring matrix extracellular phosphoglycoprotein; and
  - (d) biological active in promoting bone growth.

9. The peptide of claim 8, wherein the peptide is selected from the group consisting of

**DFEGSGYTDLQERGD**

**YTDLQERGDNDISPF**

**ERGDNDISPFSGDGQ**

**TDLQERGDNDISPFSGDGQPFKD**

10. An antibody which binds specifically to a peptide of claim 8.

11. An antibody which binds specifically to a peptide of claim 9.

12. A formulation comprising:  
a carrier; and  
a therapeutically effective amount of a peptide of claim 8.

13. The formulation of claim 12, wherein the carrier is a saline solution and the formulation is injectable.

14. The formulation of claim 12, wherein the carrier is a paste and the formulation is a toothpaste.

15. The formulation of claim 12, wherein the carrier is an aqueous flavored solution and the formulation is a mouthwash.

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16. A pharmaceutical formulation, comprising:  
a pharmaceutically acceptable carrier; and  
a therapeutically effective amount of a peptide comprising from ten to fifty amino acids which amino acids correspond to an amino acid sequence of naturally occurring protein matrix extracellular phosphoglycoprotein and comprising the RGD sequence of phosphoglycoprotein, the peptide further characterized by enhancing bone growth in a mammal.

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